

REMARKS

In the Office Action of May 13, 2008, the Examiner issued new grounds of rejection for claims 1-39. Based on the following remarks, Applicants respectfully request reconsideration of the Application.

Rejection Under 35 U.S.C. §101

Examiner rejected claims 10-19 and 30-39 as being directed to non-statutory subject matter. In particular, Examiner indicated that the rejected claims are interpreted as “software per se” and therefore directed towards non-statutory subject matter. (*Office Action*, 2-3) Applicants respectfully traverse this rejection.

Claim 10-18

Applicants respectfully submit that claim 10 is not directed towards non-statutory subject matter. Claim 10 recites “a system for storage filing” comprising “a first storage filer” and “a second storage filer.” In exemplary embodiments, storage filer comprises hardware, such as a server, which may perform functions and execute code. One embodiment of a storage filer is illustrated in Figure 5 (SAN filer 550). With respect to SAN 550 of Figure 5, the specification discloses “The SAN filer 550 can be considered as a diskless server [whereby] data is stored on the SAN 560 on storage devices such as such as conventional Fibre Channel-attached disk arrays and tape libraries.” (¶ [0049]) A server is not software, but rather a physical component of hardware which is able to provide services. To support Applicants position that a server is not software, Applicant directs the Examiner to the definitions of a server.

Server – a computer system in a network that is shared by multiple users. (<http://www.techweb.com/>)

Server - a computer or device on a network that manages network resources. (www.webopedia.com)

For at least the reasons stated above, the “storage filer” recited in claim 10 recites physical hardware and is directed to statutory subject matter. Therefore, the rejection of claim 10 should be withdrawn.

Claims 11-18 depend on claim 10 and include the physical hardware limitations of claim 10. Therefore, claims 11-18 are also directed to statutory subject matter, and the rejection to these claims should be withdrawn.

Claim 30-38

Claim 30 is also not directed towards “software per se.” Claim 30 recites “A first storage filer” which comprises “a processor,” “an interface,” and “a memory.” With respect to Figure 6, for example, the specification discloses “The SAN filer 630 includes a host sub-system 620 and an embedded sub-system 640 [...]. The host sub-system 620 includes a cluster network interface 622, a host main processing unit (MPU) 624, a flash module 626, [...]” (¶ [0055]) Applicants respectfully submit that it is widely accepted that a processor, an interface, and a memory such as flash modules are each considered hardware components. If Examiner insists to interpret a processor, interface or memory as software, Applicants respectfully invite the Examiner to support this interpretation with a supporting source. Because a processor, an interface and a memory are physical hardware, claim 30 is directed to statutory subject matter. Therefore, the rejection of claim 30 should be withdrawn.

Claims 31-38 depend on claim 30 and include the physical hardware limitations of claim 30. Therefore, claims 31-38 are also directed to statutory subject matter, and the rejection to these claims should be withdrawn.

Claim 19 and 39

Claims 19 and 39 are directed to statutory subject matter, not “software per se” as indicated by the Examiner. Claims 19 and 39 are “means plus function” claims and are to be construed according section 2181 of the MPEP, section II, entitled “Description Necessary to Support a Claim Limitation Which Invokes 35 USC 112, Sixth paragraph.” MPEP §2101, II, first paragraph, states in part:

35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language “shall be construed **to cover the corresponding structure** described in the specification and equivalents thereof.” (emphasis added)

MPEP §2101, II, second paragraph, states in part:

The proper test for meeting the definiteness requirement is that the corresponding structure (or material or acts) of a means (or step)-plus-function limitation **must be disclosed in the specification itself in a way that one skilled in the art will understand what structure (or material or acts) will perform the recited function.** See *Atmel Corp. v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1381, 53 USPQ2d 1225, 1230 (Fed. Cir. 1999).

MPEP §2101, II, third paragraph, states in part:

The disclosure of the structure (or material or acts) may be implicit or inherent in the specification if it would have been clear to those skilled in the art what structure (or material or acts) corresponds to the means (or step)-plus-function claim limitation. See *Id.* at 1380, 53 USPQ2d at 1229; *In re Dossel*, 115 F.3d 942, 946-47, 42 USPQ2d 1881, 1885 (Fed. Cir. 1997).

Based on MPEP §2101, II, claims 19 and 39 are to be construed to cover structure identified in the specification, either implicitly or inherently, and equivalents thereof. The functional elements recited in claims 19 and 39 are described in the specification with respect to at least Figures 16 and 19. Figures 16 and 19 illustrate flowcharts of embodiments of methods performed by one or more SAN filers. The structure of embodiments of SAN filers is described in the

specification with respect to at least Figures 5-6 and 8-12. As discussed above, SAN filers may be implemented as servers which comprise physical hardware. One skilled in the art of file service movement would understand that the structure that performs the recited functions of claims 19 and 39 would be the structure of different embodiments of SAN filers described in the specification with respect to at least Figures 5-6 and 8-12. Therefore, the elements recited in claims 19 and 39 are supported with structure described in the specification and should not be interpreted as “software per se.” Therefore, the rejections of claims 19 and 39 should be withdrawn.

Rejection Under 35 U.S.C. §103

The Examiner rejected claims 1-39 under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 6,920,579 (*Cramer*) in view of United States Patent No. 5,860,116 (*Washington*) and United States patent Publication No. 2003/0149736 (*Berkowitz*). (*Office Action*, 5) Because the combination of *Cramer*, *Washington*, and *Berkowitz* fails to disclose or suggest each limitation of claims 1-39, Applicants respectfully traverse this rejection.

Claims 1-9

Among other limitations, claim 1 recites, in part, “**determining an optimal time to suspend file operations** of the file service” and “transferring the at least one memory page using the identification from the first storage filer to a second storage filer **during the optimal time.**” (emphasis added) The cited references, considered individually or in combination, fail to disclose the embodiment of claim 1. *Cramer* discloses a system takeover of one server by another server. When taking over a server, the first server completes existing file service requests and ceases accepting

new file requests. (col. 3, lines 8-12) A graceful shutdown of the server involves starting a timer, during which in-process requests are completed and no new file service requests are processed. (Col. 7, lines 16-22)

As Examiner indicated, *Cramer* does not disclose “determining an optimal time to suspend file operations of the file service” and “transferring the at least one memory page using the identification from the first storage filer to a second storage filer during the optimal time” as recited in claim 10. (*Office Action*, 5 ¶ 2 to 6 ¶ 2)

Washington also does not disclose the element of “determining an optimal time” to suspend file operations and to “transfer the at least one memory page [...] during the optimal time” as recited in claim 10. *Washington* discloses a system allowing memory page access both remotely and locally. When remote access to a memory location is greater than local access for a read only memory page, a memory page transfer is performed. (Col. 4, lines 1-6 and col. 5, lines 10-14) The memory page transfer disclosed in *Washington* is not performed based on a determined time, but rather a determination that remote access for a memory location is greater than local access.

As Examiner indicated, *Washington* does not disclose “determining an optimal time to suspend file operations of the file service” (*Office Action*, 5, ¶ 2 to 6, ¶ 2)

Since *Washington* does not determine an optimal time, *Washington* cannot disclose “transferring the at least one memory page using the identification from the first storage filer to a second storage filer *during the optimal time*” as recited in claim 10. Examiner cites *Washington*, col. 2, lines 29-36 to support a rejection of this limitation. (*Office Action*, 6, ¶ 1) However, the cited portion of *Washington* indicates that an apparatus may include a means for moving a memory page “when the number of accesses to that memory location from the second processor exceeds

those from the first processor.” A means for moving a memory page based on comparing a number of accesses does not disclose transferring a memory page “during an optimal time” as recited in claim 10. The cited portion of *Washington* makes no explicit or implicit disclosure that transferring a memory page is performed during an optimal time.

Berkowitz does not cure the deficiencies of *Cramer* and *Washington* with respect to claim 1. *Berkowitz* discloses transporting volumes of information from one host computer system to another using point in time copies of Logical Unit Numbers (LUNs) relating to a virtual device. (¶ [0011]) In response to receiving a request for a point-in-time copy of a volume for transport, the requested point-in-time volume information is resolved into LUN information to be copied and the system simply instructs writers to stop writing. (¶¶ [0063-0064])

Berkowitz does not disclose the element of “determining an optimal time” to suspend file operations and to “transfer the at least one memory page [...] during the optimal time” as recited in claim 1. Rather, *Berkowitz* issues a command to stop writers from writing in response to receiving a request for a volume copy. There is no disclosure by *Berkowitz* that the command to stop the writers is made at an “optimal time,” nor any other determination of an “optimal time” to suspend file operations as recited in claim 1. Rather, *Berkowitz* stops writers in response to receiving a request, regardless of when that request is received.

The combination of *Cramer*, *Washington*, and *Berkowitz* also do not provide every limitation of claim 1. In particular, the combination of the references fails to disclose “determining an optimal time” to suspend file operations and to “transfer the at least one memory page [...] during the optimal time” as in claim 1.

Because the cited references do not disclose the elements of claim 1 either individually or in combination, claim 1 is not obvious over the cited references and

should be allowed. Claims 2-9 depend from claim 1 and include the elements of claim 1 in addition to the patentably distinguishing limitations they recite. Therefore, claims 2-9 are not obvious over the cited references for at least the same reasons as claim 1, and claims 2-9 should be allowed.

Independent claims 10, 19, 20, 30, and 39 contain a similar limitation of determining an optimal time to suspend file operations of the file service, and transferring at least one memory page during the optimal time. As such, these claims are not obvious over the cited references for at least the same reasons as those of claim 1. Claims 11-18, 21-29, and 31-38 depend from independent claims 10, 20, and 30, respectively. For at least the same reasons as those of their independent base claims, claims 11-18, 21-29, and 31-38 are not obvious in view of the cited references.

Conclusion

Based on the foregoing remarks, Applicants believe the rejections to the claims have been overcome, and that the present Application is in condition for allowance. If the Examiner has any questions regarding the case, the Examiner is invited to contact Applicants' undersigned representative.

Respectfully submitted,

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